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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/615,251

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John Rubis

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8194

7590

03/29/2004

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EXAMINER

CHERRY, STEPHEN J

ART UNIT

PAPER NUMBER

2863

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

8M

## Office Action Summary

Application No.

10/615,251

Applicant(s)

RUBIS ET AL.

Examiner

Stephen J. Cherry

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,7-10,12-15,20,21 and 23 is/are rejected.
- 7) ☐ Claim(s) 2-6,11,16-19 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

The drawings are objected to because reference numbers in figures do not correspond with text in specification. For example, the motor is indicated as M1 in the figure, yet this reference number does not appear in the specification. Additionally, the specification refers to figure 2, which is not present in the application. This appears to be a reference to figures 2A through 2D. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

Claim 12 is objected to because of the following informalities: the use of the symbol, "/", does not convey whether compliance with both or only one of the recited standards is within the bounds of the claim. Appropriate correction is required.

Claims 16-23 are objected to because of the following informalities: The dependency of claims 16-23 is incorrect. In a telephone interview applicants representative, Mr. Anastasi, indicated that claim 16 should be dependant upon claim 15, 17 upon 16, 18 upon 17, 19 upon 16, and 20-23 upon 15. The examination of this application will be based on the recommended dependency of these claims. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7-10 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,939,675 to Luitje.

Claim 1 recites, as anticipated by Luitje ('675):

1. A system for displaying monitored measurements of an apparatus, comprising: a data bus interface coupled to a data bus of the apparatus, the data bus containing measurement data which is monitored by sensors in the apparatus ('675, fig. 1, depicts distance sensor, 12, and ignition pulse transducer, 13, coupled to serial link 16; the interface is depicted as 17, and the triangle in box 20 that connects to mcu, 22); a plurality of instruments each having a microcontroller coupled to the data bus interface (20, and 19, and col. 3, lines 5-12 and 60-68); and a motor being driven by the microcontroller and an indicator needle being coupled to the motor for displaying a measurement ('675, 29, and col. 3, line 65).

Claim 7 recites, as anticipated by Luitje ('675):

7. The system of claim 1, wherein the apparatus is a vehicle ('675, col. 2, line 61).

Claim 8 recites, as anticipated by Luitje ('675):

8. The system of claim 1, wherein the motor is a stepper motor ('675, col. 3, line 67).

Claim 9 recites, as anticipated by Luitje ('675):

9. The system of claim 1, wherein the instrument is a gauge ('675, col. 3, line 12).

Claim 10 recites, as anticipated by Luitje ('675):

10. The system of claim 9, wherein the gauge measures pressure, temperature, liquid level, or rotations per minute ('675, 19).

Claim 14 recites, as anticipated by Luitje ('675):

14. The system of claim 1, wherein the microcontroller drives current through two drive coils of the motor ('675, 24 and 26).

Claim 15 recites, as anticipated by Luitje ('675):

15. A method for displaying monitored measurements of an apparatus, comprising:  
providing measurement data to a data bus; coupling a data bus interface directly to the data bus ('675, fig. 1, depicts distance sensor, 12, and ignition pulse transducer, 13, coupled to serial link 16; the interface is depicted as 17, and the triangle in box 20 that connects to mcu, 22);  
coupling a microcontroller of an instrument directly to the data bus interface ('675, 22); and driving a motor with the microcontroller to display a measurement on the instrument ('675, col. 3, line 60).

Claim 23 recites, as anticipated by Luitje ('675):

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23. The method of claim 14 (*as stated above, this claim is interpreted as dependant upon claim 15*), further comprising driving current through two drive coils of the motor with the microcontroller ('675, 24 and 26).

Claims are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,432,497 to Briski et al.

Claim 15 recites, as anticipated by Briski ('497):

15. A method for displaying monitored measurements of an apparatus, comprising: providing measurement data to a data bus ('497, fig. 1, sensor data 10AA to bus 48); coupling a data bus interface directly to the data bus ('497, fig. 3, 50 coupled to 48); coupling a microcontroller of an instrument directly to the data bus interface ('497, 52 coupled to 50); and driving a motor with the microcontroller to display a measurement on the instrument ('497, fig. 3, 52 drives 54).

Claim 20 recites, as anticipated by Briski ('497):

20. The method of claim 14 (*as stated above, this claim is interpreted as dependant upon claim 15*), further comprising coupling a light indicator to the microcontroller such that the light indicator turns on when the microcontroller detects a given condition (52 drives warning indicator 56).

Claim 21 recites, as anticipated by Briski ('497):

21. The method of claim 14 (*as stated above, this claim is interpreted as dependant upon claim 15*), further comprising coupling an auxiliary output to the microcontroller for driving external light indicators and alarms (52 drives warning indicator 56).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The system of claim 1, wherein the data bus interface is a SAE J1708/J1587 interface.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,939,675 to Luitje in view of U.S. Patent 4,804,937 to Barbiaux.

The claim discloses, as anticipated by Luitje:

a data bus interface coupled to a data bus of the apparatus, the data bus containing measurement data which is monitored by sensors in the apparatus ('675, fig. 1, depicts distance sensor, 12, and ignition pulse transducer, 13, coupled to serial link 16; the interface is depicted as 17, and the triangle in box 20 that connects to mcu, 22); a plurality of instruments each having a microcontroller coupled to the data bus interface (20, and 19, and col. 3, lines 5-12 and 60-68); and a motor being driven by the microcontroller and an indicator needle being coupled to the motor for displaying a measurement ('675, 29, and col. 3, line 65).

Luitje does not disclose the use of SAE J1939 interface.

The claim further recites, as disclosed by Barbiaux:

wherein the data bus interface is a SAE J1708/J1587 interface ('937, col. 3, line 53).

Thus, it would have been obvious at the time the invention was made to combine a SAE J1708/J1587 interface with the invention of Luitje to allow effective calibration ('937, col. 1, line 32).

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,939,675 to Luitje in view of U.S. Patent 6,263,269 to Dannenberg.

The claim discloses, as anticipated by Luitje:

a data bus interface coupled to a data bus of the apparatus, the data bus containing measurement data which is monitored by sensors in the apparatus ('675, fig. 1, depicts distance sensor, 12, and ignition pulse transducer, 13, coupled to serial link 16; the interface is depicted as 17, and the triangle in box 20 that connects to mcu, 22); a plurality of instruments each having a microcontroller coupled to the data bus interface (20, and 19, and col. 3, lines 5-12 and 60-68); and a motor being driven by the microcontroller and an indicator needle being coupled to the motor for displaying a measurement ('675, 29, and col. 3, line 65).

Luitje does not disclose the use of SAE J1939 interface.

The claim further recites, as disclosed by Dannenberg:

wherein the data bus interface is a SAE J1939 interface ('269, fig. 2, 18).



Thus, it would have been obvious at the time the invention was made to combine a SAE J1939 interface with the invention of Luitje to improve reliability ('269, col. 2, line 60).

***Allowable Subject Matter***

Claims 2-6, 11, 16-19 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claims 2-6 recite, "wherein the microcontroller includes a power down mode feature wherein the microcontroller monitors the rate of change of the measurement being displayed on the instrument and enters into a power down mode when the rate of change is below a given threshold". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 11 recites, "wherein the instrument includes illumination from a back light driven by the microcontroller". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claims 16-19 recite, "monitoring a rate of change of the measurement being displayed on the instrument; and entering a power down mode when the rate of change is below a given threshold". This feature in combination with the remaining claimed structure avoids the prior art of record.

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Claim 22 recites, if amended as described above, recites, "further comprising illuminating the instrument with a back light driven by the microcontroller". This feature in combination with the remaining claimed structure avoids the prior art of record.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Cherry whose telephone number is (571) 272-2272. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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